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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SANTOS, PATRICK J D	

ART UNIT	PAPER NUMBER
2171	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/994,529	STERLING ET AL.	
	Examiner	Art Unit	
	Patrick J Santos	2171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

gm 6/1/04

2. Claims 1, 10-13, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,285,995 issued to Abdel-Mottaleb et al. (hereafter Abdel-Mottaleb '995).

Claim 1:

Regarding Claim 1, Abdel-Mottaleb '995 discloses a hierarchical means to store images in a database clustered around exemplar objects (Abdel-Mottaleb '995: Abstract). Clusters are defined by similarity measures, which in turn are calculated on multiple features of an image (Abdel-Mottaleb '995: col. 8, lns. 17-56). Specifically, Abdel-Mottaleb '995 discloses: a database system, including:

- an exemplar object within the database configured to accept and store a plurality of exemplar cases (Abdel-Mottaleb '995: col. 14, lns. 62-64; col. 2, lns. 5-7);
- a target object within the database configured to accept and store a target case (Abdel-Mottaleb '995: col. 14, ln. 65; col. 2, ln. 8 – note that a query image reads on a target case); and

- a comparison object within the database for comparing the target case with the plurality of exemplar cases (Abdel-Mottaleb '995: col. 14, ln. 66 to col. 15, ln. 2; col. 2, lns. 9-12).

Claims 10 and 12:

Regarding Claims 10 and 12, Abdel-Mottaleb '995 discloses all the limitations of Claim 1 (supra). Additionally, Abdel-Mottaleb '995 discloses:

- (Claim 10) including a means of grouping exemplar cases into domains, where the exemplar case may be a member of more than one domain (Abdel-Mottaleb '995: col. 11, lns. 39-41 – note that Abdel-Mottaleb '995 supports "subclusters" which means that an item can be grouped into a subcluster and additionally with a parent cluster; further note that clusters and subclusters read on domains).
- (Claim 12) the target case includes a target feature; and the exemplar case includes an exemplar feature (Abdel-Mottaleb '995: col. 8, lns. 17-56 – note that the separate regions of interest in an image in Abdel-Mottaleb '995 read in on a feature).

Claim 11:

Regarding Claim 11, Abdel-Mottaleb '995 discloses all the limitations of Claim 10 (supra). Additionally, Abdel-Mottaleb '995 discloses: a user interface allowing the pruning of domains to exclude from comparison with the target case (Abdel-Mottaleb '995: col. 15, lns. 4-5; col. 2, lns. 13-14 – note that selection means for selecting a cluster reads on pruning domains).

Claim 13:

Regarding Claim 13, Abdel-Mottaleb '995 discloses all the limitations of Claim 12 (supra). Additionally, Abdel-Mottaleb '995 discloses: a user interface allowing population of

the target feature (Abdel-Mottaleb '995: col. 14, ln. 65; col. 2, ln. 8 – note that a query image reads on a target case).

Claim 30:

Regarding Claim 30, Abdel-Mottaleb '995 discloses: a method for implementing a database function where the method includes accepting a target case for comparison (Abdel-Mottaleb '995: col. 14, ln. 65; col. 2, ln. 8 – note that a query image reads on a target case); and comparing, within the database, the target case with a plurality of the exemplar cases stored in the database (Abdel-Mottaleb '995: col. 14, ln. 66 to col. 15, ln. 2; col. 2, lns. 9-12).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2-9, 14-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abdel-Mottaleb '995 in view of U.S. Patent No. 5,864,870 issued to Guck (hereafter Guck '870)

Claims 2, 5, and 8-9:

Regarding Claims 2, 5, and 8-9, Abdel-Mottaleb '995 discloses all the limitations of Claim 1 (supra). However, Abdel-Mottaleb '995 does not explicitly disclose:

- (Claim 2) the exemplar object includes an attribute of a schema; and the comparison object includes a method of the schema.

- (Claim 5) the target object includes an attribute of a schema.
- (Claim 8) the exemplar object includes a database table; and the target object includes a database table.
- (Claim 9) the comparison object includes a macro.

Guck '870 discloses the application of an Object Relation Database to retrieve multimedia files with differing file formats (Guck '870: Abstract). Furthermore, Guck '870 discloses using a "virtual file class" as an exemplar class for instances of concrete file classes (Guck '870: col. 6, lns. 44-67). Specifically, Guck '870 discloses:

- (Claim 2) the exemplar object includes an attribute of a schema; and the comparison object includes a method of the schema (Guck '870: col. 4, lns. 15-40; col. 6, lns. 13-30 – note that the attribute, schema, and method are supported by the Object Relational Database of Guck '870).
- (Claim 5) the target object includes an attribute of a schema (Guck '870: col. 4, lns. 15-40; col. 6, lns. 13-30 – note that attributes are supported by the Object Relational Database of Guck '870).
- (Claim 8) the exemplar object includes a database table; and the target object includes a database table (Guck '870: col. 6, lns. 13-30 – note that in Object Relational Databases, such as that of Guck '870, objects are stored in database tables).
- (Claim 9) the comparison object includes a macro (Guck '870: col. 6, lns. 13-30 – note that in Object Relational Databases, such as that of Guck '870, support macros).

It would have been obvious to a person having ordinary skill in the art to implement the image retrieval system of Abdel-Mottaleb '995 with the Object Relational Database of Guck

'870. The motivation to combine is suggested by Guck '870 which discloses: "Object-relational database systems combine the advantages of compatibility with the standard relational database model with the productivity advantages of object technology." (Guck '870: col. 6, lns. 25-28).

Claim 3:

Regarding Claim 3, Abdel-Mottaleb '995 and Guck '870 in combination disclose all the limitations of Claim 2 (supra). Additionally, Abdel-Mottaleb '995 and Guck '870 in combination disclose: where the schema includes a user defined type (Guck '870: col. 6, lns. 13-30 – note that in Object Relational Databases, such as that of Guck '870, support user defined types).

Claim 4:

Regarding Claim 4, Abdel-Mottaleb '995 and Guck '870 in combination disclose all the limitations of Claim 3 (supra). Additionally, Abdel-Mottaleb '995 and Guck '870 in combination disclose: the user defined type is implemented using an object relational database (Guck '870: col. 6, lns. 13-30 – note that in Object Relational Databases, such as that of Guck '870, support user defined types).

Claim 6:

Regarding Claim 6 Abdel-Mottaleb '995 and Guck '870 in combination disclose all the limitations of Claim 5 (supra). Additionally, Abdel-Mottaleb '995 and Guck '870 in combination disclose: where the schema includes a user defined type (Guck '870: col. 6, lns. 13-30 – note that in Object Relational Databases, such as that of Guck '870, support user defined types).

Claim 7:

Regarding Claim 7 Abdel-Mottaleb '995 and Guck '870 in combination disclose all the limitations of Claim 6 (supra). Additionally, Abdel-Mottaleb '995 and Guck '870 in combination disclose: the user defined type is implemented using an object relational database (Guck '870: col. 6, lns. 13-30 – note that in Object Relational Databases, such as that of Guck '870, support user defined types).

Claims 14-15:

Regarding Claims 14-15, Abdel-Mottaleb '995 discloses all the limitations of Claim 12 (supra). However, Abdel-Mottaleb '995 does not explicitly disclose:

- (Claim 14) a user interface allowing population of the exemplar feature.
- (Claim 15) the comparison object includes a user defined function.

Guck '870 discloses:

- (Claim 14) a user interface allowing population of the exemplar feature (Guck '870: col. 4, lns. 41-51 – note that in Object Relational Databases, such as that of Guck '870, support database loaders to load data into the database).
- (Claim 15) the comparison object includes a user defined function (Guck '870: col. 6, lns. 13-30 – note that in Object Relational Databases, such as that of Guck '870, support user defined functions).

It would have been obvious to a person having ordinary skill in the art to implement the image retrieval system of Abdel-Mottaleb '995 with the Object Relational Database of Guck '870. The motivation to combine is on the same basis as Claim 2 (supra).

Claim 16 and 22-24:

Regarding Claims 15 and 22-24, Abdel-Mottaleb '995 and Guck '870 in combination disclose all the limitations of Claim 15 (supra). Additionally, Abdel-Mottaleb '995 and Guck '870 in combination disclose:

- (Claim 16) the user defined function calculates a similarity metric representing the similarity between the target feature and the exemplar feature (Abdel-Mottaleb '995: col. 6, lns. 7-15 – further note that Abdel-Mottaleb '995 recites alternative similarity measures from col. 6 through col. 9).
- (Claim 22) the user defined function indirectly recognizes the similarity between the target and exemplar case (Abdel-Mottaleb '995: col. 6, lns. 7-15 – further note that Abdel-Mottaleb '995 recites alternative similarity measures from col. 6 through col. 9).
- (Claim 23) the user defined function is aware of features which are indicative of a finding; and the user defined function will recognize that the target case possesses the feature indicative of the finding exemplified by the exemplar case, even when the exemplar case lacks that feature (Abdel-Mottaleb '995: col. 8, lns. 17-56 –Abdel-Mottaleb '995 recites support for image regions which read on comparison of features).
- (Claim 24) the user defined function is aware of features, the lack of which are indicative of a finding; and the user defined function will recognize that the target case lacks a feature, the lack of which is indicative of the finding exemplified by the exemplar case, even when the exemplar case possesses that feature (Abdel-Mottaleb '995: col. 8, lns. 17-56 –Abdel-Mottaleb '995 recites support for image regions

which read on comparison of features, further note that different images may not have corresponding regions).

Claims 17-19:

Regarding Claims 17-19, Abdel-Mottaleb '995 and Guck '870 in combination disclose all the limitations of Claim 16 (supra). Additionally, Abdel-Mottaleb '995 and Guck '870 in combination disclose:

- (Claim 17) the user defined function performs mathematical operations to determine the similarity metric (Abdel-Mottaleb '995: col. 6, lns. 7-15 – further note that Abdel-Mottaleb '995 recites alternative similarity measures from col. 6 through col. 9, all of which involve mathematical operations).
- (Claim 18) the user defined function, in calculating the similarity metric, determines the relationships between nodes representing the target feature and the exemplar feature in a hierarchical structure (Abdel-Mottaleb '995: col. 8, lns. 17-56 – Abdel-Mottaleb '995 recites support for image regions which read on comparison of noted representing the target feature and the exemplar feature; further note that the storage relationship of the Abdel-Mottaleb '995 and Guck '870 combination is hierarchical).
- (Claim 19) the target case includes a plurality of target features and each exemplar case includes a corresponding plurality of exemplar features; and the user defined function compares the target case with each of the exemplar cases, and determines an overall match factor for each comparison (Abdel-Mottaleb '995: col. 8, lns. 17-56 – Abdel-Mottaleb '995 recites support for image regions which read on comparison of features).

Claims 20-21:

Regarding Claims 20-21, Abdel-Mottaleb '995 and Guck '870 in combination disclose all the limitations of Claim 19 (supra). Additionally, Abdel-Mottaleb '995 and Guck '870 in combination disclose:

- (Claim 20) the user defined function determines the overall match factor by computing similarity metrics by comparing each target feature in the target case with the corresponding exemplar feature in an exemplar case; and summing the similarity metrics (Abdel-Mottaleb '995: col. 8, lns. 17-45 and col. 8, lns. 46-56; – Abdel-Mottaleb '995 recites support for image regions and additionally combines the region similarities).
- (Claim 21) the user defined function determines the similarity metrics by comparing each target feature in the target case with the corresponding exemplar feature in the exemplar case; the user defined function creates a weighted similarity metric by multiplying the similarity metrics by a weight associated with that similarity metric; the user defined function determines the overall match factor by summing the weighted similarity metrics (Abdel-Mottaleb '995: col. 8, lns. 17-45 and col. 8, lns. 46-56; – Abdel-Mottaleb '995 recites support for image regions and additionally combines the region similarities; further note that taking the median of the Kullback informational divergence reads on a statistic weight.).

5. Claims 25- 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abdel-Mottaleb '995 in view of Guck '870 and in further view of the publication, "Case Based

Reasoning Technology: From Foundations to Applications (Lecture Notes in Artificial Intelligence)", by Lenz et al. published by Springer-Verlag (TM), October 15, 1998 (hereafter Lenz '98).

Claim 25:

Regarding Claim 25, Abdel-Mottaleb '995 discloses: a method for implementing a system including comparing a target case with a plurality of exemplar cases within a database to produce similarity metrics (Abdel-Mottaleb '995: col. 14, ln. 66 to col. 15, ln. 2; col. 2, lns. 9-12); and determining the similarity between the target and exemplar cases based on the similarity metrics (Abdel-Mottaleb '995: col. 6, lns. 7-15 – further note that Abdel-Mottaleb '995 recites alternative similarity measures from col. 6 through col. 9). However, Abdel-Mottaleb '995 does not explicitly disclose that the system is a case-based reasoning system.

Guck '870 discloses an Object Relational Database (Guck '870: col. 6, lns. 13-30). Guck '870 does not explicitly disclose a case-based reasoning system.

Lenz '98 discloses applying a case-based reasoning framework to problems applicable to an Object Relational Database solution (Lenz '98: pp. 339-340, Section titled, "13.3.4 Integration via Extensible Databases").

It would have been obvious to a person having ordinary skill in the art to apply the Object Relational Database of Guck '870 to the Abdel-Mottaleb '995 image retrieval system. The motivation to combine is on the same basis as Claim 2 (supra).

It would have been further obvious to a person having ordinary skill in the art to apply the case-based reasoning techniques of Lenz '98 to the Abdel-Mottaleb '995 and Guck '870 combination. The motivation to combine is suggested by Lenz '98 which discloses that

extensible databases, such as the Object Relational Database of the Abdel-Mottaleb '995 and Guck '870 combination enables "commercially successful" case-based reasoning systems that hitherto were merely academic curiosities (Lenz '98: p. 340, lns. 7-9).

Claims 26-29:

Regarding Claims 26-29, Abdel-Mottaleb '995, Guck '870, and Lenz '98 in combination disclose all the limitations of Claim 25 (supra). Additionally, Abdel-Mottaleb '995, Guck '870, and Lenz '98 in combination disclose:

- (Claim 26) comparing includes not spawning a process external to the database (Guck '870: col. 6, lns. 13-30 – note that in the Abdel-Mottaleb '995, Guck '870, and Lenz '98 combination, the comparing is an internal function of the Object Relational Database).
- (Claim 27) comparing includes not running an external program (Guck '870: col. 6, lns. 13-30 – note that in the Abdel-Mottaleb '995, Guck '870, and Lenz '98 combination, the comparing is an internal function of the Object Relational Database).
- (Claim 28) comparing includes using a user defined function of the database (Guck '870: col. 6, lns. 13-30 – note that the Object Relational Database of the Abdel-Mottaleb '995, Guck '870, and Lenz '98 combination supports user defined functions).
- (Claim 29) comparing includes determining which of the exemplar cases best matches the target case (Abdel-Mottaleb '995: col. 2, lns. 19-21).

6. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,893,095 issued to Jain et al. (hereafter Jain '095), in view of Guck '870, and in further view of Lenz '98.

Claim 31:

Jain '095 discloses: a method for implementing a system including:

- accepting information representing a target case (Jain '095: col. 4, lns. 21-32);
- accepting weights to apply to a set of respective similarity metrics (Jain '095: col. 8, lns. 35-47);
- accepting the number of closest matching exemplar cases the user wants to review (Jain '095: col. 8, lns. 20-35);
- formulating and executing, within the database, a comparison between the target case and the exemplar cases yielding the similarity metrics for that exemplar case; deriving an overall match factor for each of the exemplar cases from the similarity metrics, weighed by their weights (col. 8, lns. 6-47); and
- reporting one or more of the closest matching exemplar cases (Jain '095: col. 9, ln. 64 to col. 10. ln. 10).

However, Jain '095 does not explicitly disclose the system is a case-based reasoning system.

Guck '870 discloses an Object Relational Database (Guck '870: col. 6, lns. 13-30). Guck '870 does not explicitly disclose a case-based reasoning system.

Lenz '98 discloses applying a case-based reasoning framework to problems applicable to an Object Relational Database solution (Lenz '98: pp. 339-340, Section titled, "13.3.4 Integration via Extensible Databases").

It would have been obvious to a person having ordinary skill in the art to apply the Object Relational Database of Guck '870 to the Jain '095 image retrieval system. The motivation to combine is suggested by Guck '870 which discloses: "Object-relational database systems combine the advantages of compatibility with the standard relational database model with the productivity advantages of object technology." (Guck '870: col. 6, lns. 25-28).

It would have been further obvious to a person having ordinary skill in the art to apply the case-based reasoning techniques of Lenz '98 to the Jain '095, and Guck '870 combination. The motivation to combine is suggested by Lenz '98 which discloses that extensible databases, such as the Object Relational Database of the Jain '095 and Guck '870 combination enables "commercially successful" case-based reasoning systems that hitherto were merely academic curiosities (Lenz '98: p. 340, lns. 7-9).

7. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,067,542 issued to Cariño '542 (hereafter Cariño '542), in view of Abdel-Mottaleb '995 in furhter view Guck '870, moreover in view of Lenz '98.

Claim 32:

Regarding Claim 32, Cariño '542 discloses: a database system for accessing a database, the database system including:

- a massively parallel processing system including one or more nodes; a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs (Cariño '542: Abstract – "note the massively parallel shared nothing system");

- a plurality of virtual processes each of the one or more CPUs providing access to one or more processes; each process configured to manage data stored in one: of a plurality of data-storage facilities (Cariño '542: Fig. 4, col. 9, lns. 6-60; note that the Vprocs or Virtual Processors imply virtual processes running on one or more CPUs and the BYNET interconnection network provides the means to provide access to one ore more processes each process configured to manage data stored in one: of a plurality of data-storage facilities);

However, Cariño '542 does not explicitly disclose:

- a case-based reasoning system including an exemplar object within the database configured to accept and store a plurality of exemplar cases such that they are distributed evenly among the data storage facilities;
- a target object within the database configured to accept and store a target case; and
- a comparison object within the database: for comparing the target case with the plurality of exemplar cases.

Abdel-Mottaleb '995 discloses:

- a system including an exemplar object within the database configured to accept and store a plurality of exemplar cases such that they are distributed evenly among the data storage facilities (Abdel-Mottaleb '995: col. 14, lns. 62-64; col. 2, lns. 5-7);
- a target object within the database configured to accept and store a target case (Abdel-Mottaleb '995: col. 14, ln. 65; col. 2, ln. 8 – note that a query image reads on a target case); and

- a comparison object within the database: for comparing the target case with the plurality of exemplar cases (Abdel-Mottaleb '995: col. 14, ln. 66 to col. 15, ln. 2; col. 2, lns. 9-12).

However, Abdel-Mottaleb '995 does not disclose that the system is a case-based reasoning system.

Guck '870 discloses an Object Relational Database (Guck '870: col. 6, lns. 13-30). Guck '870 does not explicitly disclose a case-based reasoning system.

Lenz '98 discloses applying a case-based reasoning framework to problems applicable to an Object Relational Database solution (Lenz '98: pp. 339-340, Section titled, "13.3.4 Integration via Extensible Databases").

It would have been obvious to a person having ordinary skill in the art to apply the massively parallel architecture of Cariño '542 to the Abdel-Mottaleb '995 image retrieval system. The motivation to combine is suggested by Cariño '542 which discloses that use of the invention of Cariño '542 provides a particularly optimized means to query multimedia objects, such as that of Abdel-Mottaleb '995 image retrieval system (Cariño '542: col. 2, lns. 6-20)

It would have been further obvious to a person having ordinary skill in the art to apply the Object Relational Database of Guck '870 to the Cariño '542 and Abdel-Mottaleb '995 combination. The motivation to combine is suggested by Guck '870 which discloses: "Object-relational database systems combine the advantages of compatibility with the standard relational database model with the productivity advantages of object technology." (Guck '870: col. 6, lns. 25-28).

It would have been moreover obvious to a person having ordinary skill in the art to apply the case-based reasoning techniques of Lenz '98 to the Cariño '542, Abdel-Mottaleb '995, and Guck '870 combination. The motivation to combine is suggested by Lenz '98 which discloses that extensible databases, such as the Object Relational Database of the Cariño '542, Abdel-Mottaleb '995, and Guck '870 combination enables "commercially successful" case-based reasoning systems that hitherto were merely academic curiosities (Lenz '98: p. 340, lns. 7-9).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- U.S. Patent No. 5,402,524, "Case-Based Knowledge Source for Artificial Intelligence Software Shell." Alternative reference to Lenz '98 for Case Based Reasoning systems.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J Santos whose telephone number is 703-305-0707. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick J.D. Santos
May 31, 2004

SAFET METJAHIC
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100